



NOTES FOR DESIGNER: (DO NOT INCLUDE ON CONSTRUCTION DRAWINGS)

14. AS A GENERAL GUIDELINE, PUMPS SHALL BE SPECIFIED AND SELECTED USING THE FOLLOWING PARAMETERS:
- A. 250 GPM AND GREATER: CENTRIFUGAL SINGLE STAGE, DOUBLE SUCTION TYPE WITH FLEXIBLE COUPLING.
  - B. 249 GPM AND LESS: CENTRIFUGAL END SUCTION TYPE WITH FLEXIBLE COUPLING AND BACK PULL-OUT DESIGN.
    - 1. CLOSE COUPLED PUMPS MAY BE UTILIZED WHEN SPACE IS LIMITED. CARE SHOULD BE EXERCISED IN HOT WATER APPLICATIONS.
  - C. OPTION: AN IN-LINE CLOSE COUPLED PUMP MAY BE USED FOR CONSTANT COIL CIRCULATION APPLICATION.
  - D. SELECT PUMP TO OPERATE WITHIN THE CAPACITY RANGE RECOMMENDED BY THE MANUFACTURER.
  - E. SELECT PUMP TO OPERATE ON NEGATIVE SLOPE OF PUMP CURVE.
  - F. SELECT A MAXIMUM NOMINAL 1800 RPM OPERATING SPEED, (CONDENSATE RETURN PUMPS MAY BE 3600 RPM).
  - G. THE BHP AT DUTY POINT SHALL NOT EXCEED 90% OF INDICATED MOTOR NAMEPLATE HORSEPOWER RATING. THE MOTOR SHALL BE NON-OVERLOADING THROUGHOUT THE PUMP CURVE.
15. PUMP CONCRETE PAD (2000 ASHRAE SYSTEMS HANDBOOK, PAGE 39.13)
- A. MINIMUM WEIGHT OF CONCRETE SHOULD BE 2.5 TIMES THE WEIGHT OF THE PUMP ASSEMBLY.
  - B. CONCRETE PAD SHOULD BE AT LEAST 4 INCHES THICK AND 6 INCHES WIDER THAN THE PUMP BASE PLATE ON EACH SIDE.

DRAWING DEVELOPED FOR ML-3/  
ML-4 PROJECTS. FOR ML-1/  
ML-2, ADDITIONAL REQUIREMENTS  
AND QA REVIEWS ARE REQUIRED.  
(REMOVE THIS NOTE WHEN IN-  
SERTED INTO A DRAWING PACK-  
AGE).

2	8-14-03	U	EDITORIAL CHANGES & DWG NO. WAS ST6120.	RP	RF	RR	GC	TO
1	9-6-02	U	GENERAL REVISION.	RP	BB	GG	GG	TO
NO	DATE	CLASS	DESCRIPTION	DWN	DSGN	CHKD	SUB	APP

**FACILITY & WASTE OPERATIONS  
DESIGN ENGINEERING CONSTRUCTION SERVICES**

<b>ENGINEERING STANDARDS MANUAL</b>		DRAWN	R.PEARSON
		DESIGN	B.BURTSCHIEL
		CHECKED	G.GREWAL
PUMP PIPING DETAIL DESIGN NOTES		DATE	6-28-99
BLDG X	TA-X		
SUBMITTED	APPROVED FOR RELEASE		
DISCIPLINE POC: GURINDER GREWAL	STANDARDS MANAGER: TOBIN ORUCH		
		SHEET <b>8</b>	
CLASSIFICATION U		REVIEWER LARRY BAYS	DATE
PROJECT ID	DRAWING NO	REV	
<b>CHAPTER 6</b>		<b>ST-D30GEN-4</b>	
		<b>2</b>	